

< UZhVYZY\`'[Y[Yb`=G!J YfXÅW h][Yb`b UWX
A YggYfUb [f]ZZ`]b`Gc`]b [Yb

6i bXYgUbK U`hgW UZh`Yfk]f_h`< UZhVYZY\`'[Y[Yb
a i ha U»`]WX Yg`=G!A]h[`]YX`b UWX`hØX`]WX Ya`A YggYfUb [f]ZZ`]b
Gc`]b [Yb"

? Uf`gfi \Y`fc hgt

≠Y]bYa`YfgW ØhhYfbXYb`J cfZU``k Å\fybX`XYg`Gc`]b [Yf
GhUXhZYghYg`k i fXY`Ua`&' "5i [i gh&\$&(`Y]b`A YggYfUb [f]ZZ`j YfØVh"
=ggU`5``< "ž`Y]b`gmf]gW Yf`GhUUhgUb [Y\Øf][Yfž`k]fX`VYgW i`X][hž`a]h
Y]bYa`_UfYb`N]Y`i bX`Ui`g]g`Ua`]gh]gW`a`ch]j]YfhYb
, VYfnYi [i b [Yb`YfUi`g [Y\UbXY`h`ni`UVYb""8]Y
6i bXYgUbK U`hgW UZh`U`XUfUi`Z]b`Y]bYb`< UZhVYZY\`'[Y[Yb`]b
Yfk]f_hž`XU`Yf`Xf]b [YbXYb`J YfXUW`h`Ui`Z`A]h[`]YXgW UZh`]b`XYf
Ui`g`ÅbX]gW Yb`hYffc]gh]gW Yb`J YfY]b][i b [`=g`Ua`]gW Yf`GhUUh
fGŁ`VYghY`h"

8]YgYf`J cfZU``\ Uh`b]W`h`bi`f`XfY]`HcXYgcdZYf`[YZcfXYfhž`gcbXYfb
Ui`W`k`Y]hYfY`UW`h`DYfgcbYb`ni`a`HY]`gW`k`Yf`j`Yf`Y`hnh""8]Y
[fÅgg`]W`Y`HU`h`k`i`fXY`U`g`[Yn]Y`hYf`5b [f]ZZ`Ui`Z`i`b [`Åi`V][Y
A YbgW Yb`VYgW`f]YVYbž`XU`XYf`6YgW`i`X][hY`c`ZYbVUf`X]Y`5Vg]W`h
\UhYž`Y]bY`a`Ø[`]W`gh`\c`Y`NU`\`Ub`C`dZYfb`ni`Yfn]Y`Yb`"@Ui`h`XYb
9fa]h`i`b [Yb`ghUW`5``< "a`Y\`fZUW`i`bX`VYk`i`ggh`Ui`Z`XYb`< U`g!
i`b`C`VYf`_ØfdYfVYfY]W`XYf`YghVYgi`W`Yf`Y]b"

8 YhU]`g`ni`a`J cfZU``i`bX`XYf`YghbU`a`Y

8]Y`6i bXYgUbK U`hgW UZh`U`XUg`Yfa]hY`bXY`J YfZU`fYb`Ua
A cf [Yb`XYg`&)"5i [i gh&\$&(`j`cb`XYf`YbYfU`ghUUhgUbK U`hgW UZh
8ØggY`XcfZ`ØVYfbca`a`Yb""8]Y`9fa]h`i`b [Yb`g]bX`Ui`Z`<cW`h`ci`fYbž

i bX`5`<`"k i fXY`VYfY]hg`Ua`J cfUVYbXž`XYa`&(`"5i [i gh`&\$&(`ž]b
Gc`]b[Yb`j cf`Ài Z][`ZYgh[Ybca`a Yb`"6Y]`gY]bYf`J cfZØ\fi b[`j cf
XYa`9fa`]hhi b[gf]W\hYf`XYg`6i bXYg[Yf]W\hg\cZg`k i fXY`XYf
<UZhVYZ\`Yf`UggYb`i bX`X]Y`I bhYfgi W\i b[g\UZh`Ub[YcfXbYh"

⇒`F U\`a Yb`XYf`[YgYh`]W\Yb`6Ygh]a`a i b[Yb`k`]fX`5`<`"
nU\`fY]W\Y`J Yf[Y\Yb`ni f`@Ugh[Y`Y[h`"8]Y`5b`_U[Y`i a`ZUggh`A cfX
]b`XfY]:`À`Yb`žj`Yfgi`W\hYb`A`cfX`gck`]Y`[YZ\`f`]W\Y
?ØfdYfj`Yf`Yhni b[`]b`UW\h`k`Y]hYfYb`:`À`Yb`"8]YgY`gW\k`YfY`5b`_U[Y
nY][`h`X]Y`5`_hYbbch]nYb`i bX`X]Y`gmghYa`Uh]gW\Y`J Yf`_bØdZ`b[`ni
YI`hfYa`]gh]gW\Yb`≠Yc`c[`]Yb`Ui`Z`X]Y`5`<`"i]b`gY]bYb`HUhYb`[Y`Y]hYh
\UVYb`"8Yf`[YbUi`Y`NY]hdi b`_h`gY]bYg`6Y]hf]hgh`ni`f`hYffc`f]gh]gW\Yb
J`YfY]b][`i b[`V`Y]Vh`V]g`Ub[`i b`_Ufž`YXcW\`k`]fX`Ub[Ybca`a`Ybž
XUgg`Yf`g]W\`j cf`XYa`VYgU[hYb`5b[f]ZZ`XYa`≠`Ub[YgW\`cggYb
\Uh"

F YU`_h]cbYb`i bX`:`c`[Yb`XYg`5b[f]ZZg

8]Y`:`f`Ài`Y`hUhi`bX`X]Y`XUa`]hj`YfVi`bXYbYb`J`cfk`ØfZY`\UVYb
`UbXYgk`Y]h`ZØf`9b`hgYhYb`[Ygcf[`h`"≠`<i`VYfhi`gghUXh`V`]W`_h`a`Ub
bi`b`gcf[Ybj`c``Ui`ZX]Y`9bhk`]W`_i b[`XYf`9fa`]hhi`b[Yb`i bX`X]Y
g]W\Yf\Y]hgdc`]h]gW\Yb`?`cbgYei`YbnYb`"8]Y`6i`bXYgUb`k`U`hgW\UZh
\Uh`VYfY]hg`VYhc`bhž`XUgg`g]Y`U`Y`YfZc`fXYf`]W\Yb`GW`f]hY
i`bhYfbY\`a`Yb`k`]fXž`i`a`X]Y`<]bhYf[`fØbXY`i`a`ZUggYb`X`Ui`Zni`_`ÀfYb
i`bX`i`a`g]W\Yfni`ghY`Ybž`XUgg`i`ba`]hY`VUfY`6YXfc`\i`b[Yb
bYi`hfU`]g]Yfh`k`YfXYb"

8Yf`J`cfZU``]gh`b]W\h`bi`f`Y]bY`hfU[`]gW\Y`9]bnY`hUhž`gcbXYfb`k`]fZh
Ui`W\`GW`UhYb`Ui`Z`X]Y`U`_hi`Y`Y`G]W\Yf\Y]hg`U[Y`i`bX`X]Y
<YfUi`gZc`fXYfi`b[`Xi`fW\`fUX`_U`]g]YfhY`DYfgcbYb`]a`@UbX`"8]Y
,`VYf[f]ZZY`k`]Y`XYf`j`cb`Gc`]b[Yb`_ØbbhYb`VY]`Y]bYf
i`bni`fY]W\YbXYb`F`YU`_h]cb`j`cb`G]W\Yf\Y]hg]bgh]hi`h]cbYb`]b
UbXYfYb`Gh`XhYb`B`UW\U\`a`Yf`Z]bXYb`"≠`gVYgcbXYfY`X]Y`:`fU[Y`XYf
,`VYfk`UW\i`b[`i`bX`XYf`Df`Aj`Ybh]cb`j`cb`YI`hfYa`]gh]gW\Yb
GhfØa`i`b[Yb`ghY\`h`bi`b`]a`:`c`_i`g`XYf`8]g`_i`gg]cbYb"

J`YfUbghU`hi`b[Ybž`X]Y`]b`XYf`J`Yf[Ub[Yb\Y]h`U`g`g]W\YfY`5b`ÀggY
ni`a`:`Y]Yfb`[U`hYbž`_ØbbhYb`]b`Ni`_i`bZi`Xi`fW\`]b`hYbg]j`YfY

G]WYf\Y]hg_cbhfc`Yb`i bX`A U» bU\`a Yb`dfAj Ybh]j`VY[`Y]hYh
k YfXYb`a ØggYb``8]Yg`_ØbbhY`g]W`Y`bUW`9f[YVb]g`XYf
`Ui ZYbXYb`9fa]h`i b[Yb`Ui W`Ui Z`X]Y`5fh`i bX`K Y]gY`Ui gk]f_Ybž
k]Y`c_U`Y` : YghY`j]b`XYf`Ni _i bZ`h`c`f[Ub]g]Yfh`k YfXYb`

8]Y`H\Ya Uh]_`fi bX`i a`XYb`≠G`i bX`X]Y`VYXfc`\`]WYb`≠Yc`c[]Yb
_ØbbhY`gca]h`YfbYi`h`i]b`XYb`J`cfXYf[fi bX`fØW_Ybž`i bX`Yg`[]Vh
k Y]hfY]WYbXY` : fU[Yb`ni`VYU`b`h`k`c`f`h`Y`b`ž`X]Y`b]W`h`b`i`f`X]Y
C`V`f][`_Y]h`V`Y`h`f]Z`h`ž`g`c`b`X`Y`f`b`U`Y`6`Ø`f[Yf`i bX`XYfYb
G]WYf\Y]hg[YZØ\`"

8]Y`F`Y`Y`j`U`b`n`j`c`b`G]WYf\Y]h`i`b`X`D`f`A`j`Y`b`h]c`b

≠b`5`b`V`Y`h`f`U`W`h`X`Y`f` ; YgWY\`b]ggY`k]fX`_`U`f`ž`X`U`gg`X]Y`G]WYf\Y]h
j`c`b`6`Ø`f[Yfb`U`b`gc`W`Y`b`Ø`Z`Y`b`h`i]W`Y`b`J`Y`f`U`b`g`h`U`h`i`b[Yb`U`b[`Z`f]gh][
Y]b`Y`b`[`f`c» Yb`G`h`Y`Y`b`k`Y`f`h`\`U`V`Y`b`gc`h`Y``8]Y`9`f`Y][`b]ggY`k`Y`f`Z`Y`b`X]Y
, VYf`Y[i`b[`Ui`Z`ž`k]Y`k]W`h][`Y`g`]gh`ž`d`f`A`j`Y`b`h]j`Y`A`U» bU\`a`Y`b
[Y[Yb`F`U`X]_`U`]g]Yfi`b[`ni`Y`f[`f`Y]Z`Y`b``9]b`6`U`i`ghY]b`]gh`X]Y
5`i`Z`_`À`fi`b[`Ø`V`Y`f`9`i`h`f`Y`a`]ga`i`g`i`b`X`X`U`g` : Ø`f`X`Y`f`b`j`c`b`H`c`Y`f`U`b`n`j]b
X`Y`f` ; YgY`g`W`U`Z`h``8]Y`B`c`h`k`Y`b`X][`_Y]h`ž`Y]b`Y`[`Ya`Y]bg`U`a`Y`6`U`g]g
[Y[Yb` ; Yk`U`h`i`b`X`H`Y`f`f`c`f`ni`g`W`U`Z`Y`b`ž`_Ø`b`b`h`Y`g`c`a`]h`k`]Y`X`Y`f
j`Y`f`g`h`À`f`_`h`]bg`6`]W`Z`Y`X`[`Y`f`U`h`Y`b`"

<]b`h`Y`f[`fi`b`X]b`Z`c`f`a`U`h]c`b`Y`b`ni`f

H`Y`f`f`c`f]ga`i`g`V`Y`_`À`a`d`Z`i`b[`]b`8`Y`i`hg`W`_`U`b`X

8]Y`<`Y`f`U`i`g`Z`c`f`X`Y`f`i`b[Yb`X`Y`f`H`Y`f`f`c`f]ga`i`g`V`Y`_`À`a`d`Z`i`b[`]b
8`Y`i`hg`W`_`U`b`X`g]b`X`]b`X`Y`b`Y`h`h`Y`b`Y`X`f`Y`b`gh`U`f`_`[`Y`gh]Y[`Y`b`"
≠g`V`Y`g`c`b`X`Y`f`Y`X]Y`6`Y`X`f`c`\`i`b[`Xi`f`W`f`U`X]_`U`Y`]g`U`a`]gh]g`W`Y
;`fi`d`d`Y`b`ž`k`]Y`X`Y`b`≠g`U`a`]g`W`Y`b`G`h`U`U`h`f`G`ž`ghY`h`X]Y
G]WYf\Y]hg`V`Y`\`Ø`f`X`Y`b`j`c`f[`f`c» Y`5`i`Z[`U`V`Y`b``8`Y`f`≠G`\`U`h`b]W`h`b`i`f`]b
G`m`f]Y`b`i`b`X`]a`≠U`ž`g`c`b`X`Y`f`b`U`i`W`]b`9`i`f`c`d`U`5`b`\`À`b[`Y`f`f`Y`_`fi`h]Y`f`h`"
8]Y`g`Y`F`Y`_`fi`h]Y`fi`b[`Y`f`Z`c`[`h`\`À`i`Z][`Ø`V`Y`f`g`c`n]U`Y`A`Y`X]Y`b`i`b`X
≠h`Y`f`b`Y`h`d`U`h`Z`c`f`a`Y`b`ž`X]Y`Y`g`X`Y`b`9`i`h`f`Y`a`]gh`Y`b`Y`fa`Ø[`]W`Y`b`ž`]\`f`Y
≠Y`c`c[]Y`b`ni`j`Y`f`V`f`Y]h`Y`b`i`b`X`d`c`h`Y`b`n]Y`Y`H`A`h`Y`f`ni`[`Y`k`]b`b`Y`b`"

8]Y`X`Y`i`hg`W`Y`b`G]WYf\Y]hg`V`Y`\`Ø`f`X`Y`b`\`U`V`Y`b`U`i`Z`X]Y`g`Y`6`Y`X`f`c`\`i`b[

fYU[]Yfhž']bXYa 'g]Y`X]Y`HYffcf]ga i gVY_Àa dZi b[']bhYbg]j]Yfhi bX
A U» bU\ a Yb`k]Y`j YfghÀf_hY` , VYfk UW i b[' j cb`J YfXAW h][Yb`i bX
X]Y`6YgW`U[bU\ a Y`j cb`J Yfa Ò[Ybgk YfhYb`j cb`HYffcf]ghYb
i a [YgYmh\`UVYb" `5i W` []VhYg`ja a Yf`k]YXYf`bUh]cbU`Y`i bX
]bhYfbUh]cbU`Y`? ccdYfUh]cbYbž`i a `XYb`5i ghUi gW` j cb
`bZcfa Uh]cbYb`ni `j YfVYggYfb" ` `b`X]YgYa `? cbhYI h]gh`Yg`k]W`h][`ni
j Yfa Yf_Ybž`XUgg`8Yi hgW`UbX`bUW`XYa `5bgW`U[`Ui Z`XYb
6Yf`]bYf`K Y]\bUW`hga Uf_h`ja `8YnYa VYf`&\$%* `gY]bY`GhfUHY[]Yb
ni f`HYffcf]ga i gdfÀj Ybh]cb`i a ZUggYbX`ØVYfdfØZhi bX`Ub[YdUggh
\Uh"

GhUh]gh]gW`Y`8 UhYb`ni f`? f]a]bU`]hÀh`i bX HYffcf]ga i g

@Ui h`XYa `6i bXYg_f]a]bU`Ua h`f6? 5È`gh]Y[`X]Y`NU\` `j cb`GhfUZhUhYb
a]h`g`Ua]gh]gW`Ya `<]bhYf[fi bX`ja ` `U\ f`&\$&' `ja `J Yf[`Y]W`ni
&\$&&`i a `Yhk U`&\$i " ` `b`g[YgUa h`k i fXYb`%"`\$' +`GhfUZhUhYb`a]h
6Yni [`ni a `]g`Ua]gh]gW`Yb`9i hfYa]ga i g`fY[]ghf]Yfh" `8]YgY
GhUh]gh]_Yb`j YfXYi h`]W`Yb`X]Y`Xf]b[YbXY`Bchk YbX][_Y]hž`g]W`a]h
XYf`H\Ya Uh]_`XYg`HYffcf]ga i g`Ui gY]bUbXYfni gYhnYb"

Ni XYa `nY][Yb`i a ZfU[Yb`XYg`DYk `F YgYUfW` `7YbhYfgž`XUgg`g]W`
X]Y`K U\fbY\ a i b[`XYf`6YXfc\ i b[`Xi fW` `]g`Ua]gh]gW`Yb`HYffcf`]b
XYf`XYi hgW`Yb`6Yj Ò`_Yfi b[`ja ` `U\ fYgj Yf`Ui Z`&\$&' `j YfghÀf_h`Uh"
F i bX`+`\$i `XYf`6YZfU[hYb`[UVYb`Ubž`XUgg`g]Y`g]W`Gcf[Yb`ØVYf
a Ò[`]W`Y`HYffcfUbgW`À[Y`ja `Y][YbYb`@UbX`a UW`Yb" `8]YgY
GhUh]gh]_Yb`i bhYfghfY]W`Yb`X]Y`Bchk YbX][_Y]h`Y]bYf`Zcfh`Ui ZYbXYb
5i gY]bUbXYfgYhni b[`a]h`XYa `H\Ya U`i bX`XYf`9bhk]W`i b[
YZY`_hj] Yf`GhfUHY[]Yb`ni f`HYffcf]ga i gVY_Àa dZi b["

<]ghcf]gW`Y`DUfU`Y`Yb`i bX`ZfØ\ YfY`J c fZÀ`Y`

9]b`VYa Yf_Ybgk YfhYf`\]ghcf]gW`Yf`J c fZU`ž`XYf`DUfU`Y`Yb`ni `XYa
U_hi Y`Yb` : U` `Ui Zk Y]ghž`]gh`XYf`5bgW`U[`Ui Z`XYb
K Y]\bUW`hga Uf_h`]b`6Yf`]b`]a `8YnYa VYf`&\$%* " `5i W`X]YgYf
5bgW`U[`k i fXY`j cb`Y]bYa `fUX]_U`]g]YfhYb`HÀhYf`j YfØVhž`XYf`g]W`
XYa `G`ni [Y\ Òf][`ZØ\`hY" `6Y]X]YgYa `5bgW`U[`k i fXYb`%&

A YbgWXYb' [YhØhYhi bX'nU\`fY]WXY`k Y]hYfY`j Yf`Yhnh`

6Y]XY`J cfZÄ`Y`nY][Yb`X]Y`j Yf\YYfYbXYb` : c`[Yb`j cb`9]bnY`hÄhYfbž
X]Y`Xi fWXY`hYfYa`]gh]gWXY` ðYc`c` []Yb`a`ch]j]Yfh`k YfXYb`"8Yf
l bhYfgWXY]X`]Y[h`YXcWXY`]b`XYf`<YfUb[Y\Ybgk Y]gY`XYf`6Y\ÖfXYb.
K Ä\fybX`bUWXY`Ya` `6Yf`]bYf`5bgWXY`U[`Y]bY`j YfghÄf`hY`8]g_i gg]cb
ØVYf`X]Y`G]WXYf\Y]hi bX`J cfVYi [i b[ga`U» bU\`a` Yb`ghUhhZUbXž`]gh
XYf`U`_hi`Y`Y` : U`Y`]b`<]bk Y]g`XUfUi` Z`XUgg`hfc`h`U`Yf
6Ya` Ø\i b[Yb`gc`WXY`HUhYb`k Y]hYf\]b` [YgWXY\Yb`_ÖbbYb`"8]Y
ni bY\`a` YbXY`FUX]_U`]g]Yfi b[`j cb`9]bnY`dYfgcbYb`V`Y]Vh`Y]bY
<YfUi`gZcfXYfi b[`ZØf`X]Y` [YgY`gWXY`UZh`]WXY`G]WXYf\Y]h`]b
8Yi`hgWXY`UbX`"

8]Y`@Y\fyb`Ui`g`XYf`J`Yf[Ub[Yb\Y]hj`YfXYi`h]WXYb`X]Y`6YXYi`hi`b[
j`cb`DfÄj`Ybh]cbga`U» bU\`a` Ybž`5i`Z`Äfi`b[`i`bX`XYf`B`chk`YbX][`_Y]hž
fUX]_U`Yb` ðYc`c` []Yb`ZfØ\nY]h][`Ybh[Y[Ybni`k`]f`_Yb`"

8YhU]`g

6Ygi`WXYb`G]Y`i`bg`Ui`Z`b!U[`"XY