

F cVYfh: "? YbbYXmi bhYfghØhnh'Hfi a d.
9]bY`ØVYffUgWÅ YbXY`5`]Ub n`]b`5f]nc bU

F cVYfh: "? YbbYXmi bhYfghØhnh'8cbU`X`Hfi a d`VY]
K U\`_Ua d] YfUbghU`hi b[`]b`5f]ncbU`i bX`_ØbX][h`FØW_ni [
Ui g`XYb`Gk]b[`GhUhYg`Ub"

⊕; `YbXU`Yž`5f]ncbUž`Uh`Y]b`i bYfk UfhYhYg`dc`h]gWÅ Yg`9fY][b]g
X]Y`5i Za Yf_gUa _Y]h`j]Y`Yf`Ui Z]g]WÅ`[Ync[Yb.`F cVYfh: "? YbbYXmž
Y]b`dUfhY`c]gYf`DfÅg]XYb]hgWÅ UZh_g_UbX]XUhž`hfUh`Ui Z`Y]bYf
K U\`_Ua d] YfUbghU`hi b[`XYg`Y`Ya U`][Yb`DfÅg]XYbhYb`8cbU`X
Hfi a d`Ui Z`8]Yg`a Uf_]Yfh`Y]bY`VYa Yf_Ybgk YfhY`K YbXY`]b`XYf
dc`h]gWÅ Yb`@UbXgWÅ UZh`XU`? YbbYXmini j cf`U`g`_f]h]gWÅ Yf
6YcVUWÅ hYf`j cb`Hfi a d`k U\`f[Ybca`a Yb`k`i fXY"~K]f`ghUbXYb
Yhk Ug`Ui ZYbh[Y[Yb[YgYhnhYb`GY]hYb" žYf`_`ÀfhY`Hfi a džk`À`fYbX
Yf`? YbbYXmini`gY]bYf`J YfUbghU`hi b[`k`]`_ca`a Yb`_]Y»"

8]YgY`Ni gUa`a Yb_i bZh`k`i fXY`i`a gc`VYa Yf_Ybgk YfhYfž`U`g
? YbbYXm`bi f`k`Yb][Y`Ghi bXYb`ni j cf`VY`_Ubbh[Y[YVYb`_`UhYž
XUgg`Yf`]a`K Yhh`_Ua d`Zi`a`X]Y`Yb]hgWÅ Y]XYbXYb`~Gk]b[`GhUhYg`
Ui g`XYa`F YbbYb`Ui gghY][Yb`i bX`Hfi a d`i bhYfghØhnyb`k`ØfXY"
8]YgY`GhfUhY[]Y`_ØbbhY`g]WÅ`U`g`Yb]hgWÅ Y]XYbX`Yfk Y]gYbž`i`a`X]Y
Gh]a`a Yb`ZØf`Hfi a d`ni`a`cV]`g]YfYbž`k`À`fYbX`Yf`[Y[Yb`X]Y
XYa`c`_fUh]gWÅ Y`< YfUi`gZcfXYf]b`? Ua`U`U`< Uff]g`Ubhf]hh`8 Ua`]h`k`]fX
XYi`h`]WÅž`XUgg`X]Y`8 mbUa`_]`bbYf`U`V`XYf`Ua`Yf`_Ub]gWÅ Yb`Dc`h]_
]a`a`Yf`Z]Y» YbXYf`k`]fX`i`bX`b]WÅ`h`a`Y`f`_`Uf`nk`]gWÅ Yb`XYb
hfUX]h]cbY`Yb`DUfhY]Yb`i`bhYfgWÅ]YXYb`k`YfXYb`_Ubb"

8]Y`6YXYi hi b[`XYf`l bhYfghØhni b[`j`c`b
? YbbYXm

⊕a]hYb`XYf`Ui hghUf`_Yb`l bhYfghØhni b[`XYf`Hfi a d!5b`_`Àb[Yf

Yf_`ÀfhY`?YbbYXmž`Yg`[Y\Y`]\a`XUfi`a`ž`b]W\h`ØVYf`X]Y`8`]ZYfYbnYb
nk`]gW\Yb`]\bYb`ni`gdFYW\Ybž`gcbXYfb`g]W\`Ui`Z`X]Y`[Ya`Y]bgUa`Yb
K`YfhY`i`bX`5b`Y[Yb`ni`_`c`bnYbhf]YfYb`"~`W\`XYb`_Yž`k`]f`_`ÒbbYb
[Ya`Y]bgUa`Y]bYb`[i`hYb`9]bZi`gg`\UVYb`ž`VYhc`bhY`Yf`k`À`fYbX
gY]bYf`5bgdfUW\Y`"8`]Y`↑`VY`bXY`A`Yb[Y`ZY]YfhY`?YbbYXm`ia`]h
Y]bh`Òb][Yb`F`i`ZYb`bUW\`gY]bYa`Gd]hnbUa`Yb`~6cVVm`"i`bX
c`ZYbVUfhY`XUa`]hY]bY`k`UW\gYbXY`6Y[Y]ghYfi`b[`ZØf`gY]bY`F`c`Y`]b
X]YgYf`i`bYfk`UfhYhYb`dc`]h]gW\Yb`5`Ubn"

Hfi`a`d`gY`Vgh`VYgh`Àh][hYž`XUgg`Yf`X]Y`I`bhYfgh`Øhni`b[`?YbbYXmg`U`g
k`Yfhj`c`YfUW\hYh`9f`Yf_`ÀfhYž`XUgg`Yf`i`bX`?YbbYXm`[Ya`Y]bgUa
[Y[Yb`XUg`U`g`_`c`ffi`dh`YfUW\hYhY`dc`]h]gW\Y`9ghUV`]g\`a`Ybh
_`Aa`dZYb`k`ØfXYb`"8`]Yg`gd]Y[Y`h`Y]bY`[fØ»YfY`Ghf`Òa`i`b[`i`bX
:`fi`ghfUh]cb`]bbYf\U`V`XYf`K`À`YfgW\UZh`k`]XYfž`X]Y`]a`a`Yf`gh`Àf`_Yf
XUg`6YXØfZb]g`bUW\`J`Yf`ÀbXYfi`b[Yb`]b`XYf`dc`]h]gW\Yb`@U`bXgW\UZh
Ài`»Yfh`Hfi`a`d`VUh`ni`XYa`X`Y]Y`I`bhYfgh`Øhni`Yf`?YbbYXmg`Ui`Zž`g]W\
š`bhU`XUni`Y]bni`gW\`]Y»Yb`i`bX`XUa`]h`X]Y`?cU`]h]cb`k`Y]hYf
Ui`gni`VUi`Yb"

Ni`g`Àhn`]W\Y`≡bZcfa`Uh]cbYb`i`bX`F`YU`_h]cbYb

FcVYfh: `"?YbbYXmž`XYf`Xi`fW\`gY]bY`dc`]h]gW\Y`@Ui`ZVU\`b`i`bX
ZUa`]`]ÀfY`;`YgW\W\hY`VY`_Ubbh`]ghž`j`YfV]bXYh`]b`gY]bYf
K`À`YfgW\UZh`c`Zhj`YfgW\]YXYbY`dc`]h]gW\Y`5bg]W\hYb`"GY]bY
9bhgW\Y]Xi`b[ž`Hfi`a`d`ni`i`bhYfgh`Øhni`Ybž`_`ÒbbhY`U`g`≡bX]_Uhc`f`ZØf
g]W\`j`Yf`ÀbXYfbXY`dc`]h]gW\Y`5`UbnYb`[Yk`YfhY`h`k`YfXYbž`X]Y`ØVYf
DUfhm[fYbnYb`\]bk`Y[`U[]YfYb`"8`]Y`gc[YbUbbhY`~Gk`]b[
GhUhY`"!GhfUhY[]Y`]gh`Yb`hgW\Y]XYbXž`XU`X]YgY`6i`bXYgghUUhYb`c`Zh
X]Y`K`U\`Yb`hgW\Y]Xi`b[Yb`VYY]bZi`ggYb`_`ÒbbYb"

Hfi`a`dg`K`U\`_Ua`dZ]YfUbg`hU`hi`b[`]b`5f]ncbU`k`]fX`U`g`k`Y]hYfYf
GW\f]h`Ub[YgY\Ybž`i`a`ni`nY][Ybž`XUgg`XYf`Y\Ya`U][Y`Df`Àg]XYbh
VYfY]h]ghž`U`Y`j`YfZØ[VUfYb`F`Yggci`fW\`b`ni`a`cV]`]g]YfYb`"?YbbYXm
_`ÒbbhY`U`g`Y]b`6]bXY[`]YX`Zi`b[]YfYbž`XUg`i`bhYfgW\]YX`]W\Y
K`À`Yf[fi`ddYb`ni`gUa`a`YbVf]b[hž`X]Y`Ui`Z`XYf`Gi`W\Y`bUW\`Y]bYf
5`hYfbUh]j`Y`ni`XYb`\Yf`_`Òa`a`]W\Yb`dc`]h]gW\Yb`Df]bn]d]Yb`g]bX`"C`V
X]YgY`6Yn]Y\i`b[`XYb`[Yk`ØbgW\hYb`9ZZY`_h`\UVYb`k`]fXž`V`Y]Vh
UVni`k`UfhYbž`XcW\`XYf`YfghY`9]bXfi`W`nY][h`Y]bY`_`UfY

G][bU`k]f_i b["

6YhfUWk hYh'a Ub`X]Y`9fY][b]ggY`]b` ; `YbXU`Yž`k]fZh`X]Yg`Y]b`bYi Yg
@]Wk h`Ui ZXUg`[Y[Ybk`Åfh][Y`dc`h]gWk Y`?`]a U`]b`XYb`I G5`"8]Y
HUhgUWk Yž`XUgg`nk Y]Y]bgh`[Y[bYf]gWk Y`Dc`h]_Yf`Ub`Y]bYa`GhfUb[
n]Y\Ybž`_ÒbbhY`XYb`K`À\`Yfb`g][bU`]g]YfYbž`XUgg`Yg`Ub`XYf`NY]h
]ghž`X]Y`hfUX]h]cbY`Yb`dc`h]gWk Yb` ; fYbnYb`ni`ØVYfXYb`_Yb`"8]Y
K`À\`Yf`nY][Yb`g]Wk`]a`a`Yf`cZZYbYf`ZØf`i`b`_cbj`Ybh]cbY`Y`
6ØbXb]ggYž`X]Y`j`]Y`Y]Wk h`]b`XYf`@U[Y`g]bXž`\fY`Yb[ghY`i`bX
<cZZbi`b[Yb`]b`Y]bYf`g]Wk`gh`ÅbX][`j`Yf`ÅbXYfbXYb`K`Y`h
Ubni`gdFYWk Yb"

9]b`6`]W_`]b`X]Y`Ni`_i`bZh

8]Y`J`YfV]bXi`b[`nk`]gWk Yb`F`cVYfh`:"`?YbbYXmi`bX`8`cbU`X`Hfi`a`dž
nk`Y]`gY`\f`i`bhYfgWk`]YX`]Wk Yb`dc`h]gWk Yb`:`][`i`fYbž`_ÒbbhY`X]Y`5fh
i`bX`K`Y]gY`fYzcf`a`]YfYbž`k`]Y`X]Y`Ua`Yf]_Ub]gWk Y`K`À\`YfgWk`UZh`Ui`Z
X]Y`VYj`cfghY\YbXYb`K`U\`Yb`fYU[`]Yfh";`YbUi`Y`hnh`nY][`h`g]Wk`ž`k`]Y
ZYI`]VY`i`bX`XmbUa`]gWk`X]Y`Dc`h]_`gY]b`_Ubbž`VYgc`bXYfg`]b`NY]hYb
XYf`I`bg]Wk`Yf`\Y]h" `ϕ`Y]bYf`NY]hž`]b`XYf`Gh]a`a`Yb`ZØf`J`Yf`ÅbXYfi`b[
ni`bY\`a`YbX`Ui`hYf`k`YfXYbž`V`Y]Vh`UVni`k`UfhYbž`k`Y`Wk`Y`F`c`Y`
?YbbYXmi]b`Hfi`a`dg`?Ua`dU[`bY`gd]Y`Yb`k`]fX`i`bX`c`V`Yf`hUhg`ÅWk`]Wk
U`g`?UhU`mgUhc`f`ZØf`Y]bYb`VfY]hYfYb`dc`h]gWk Yb`K`UbXY`Zi`b[`]YfYb
_Ubb"

Dc`h]gWk Yf`?`cbhYI`h`XYf`K`U\`_Ua`dU[`bY

8]Y`dc`h]gWk Y`@UbXgWk`UZh]b`XYb`I`G5`]gh`XYfnY]hj`cb`Y]bYf`\c`Yb
Dc`Uf]gUh]cb`[`Ydf`Å[`hž`k`Ug`Ui`Wk`X]Y`K`U\`_Ua`dZghfUhY[`]Yb`XYf
?UbX]XUhYb`VYY]bZi`ggh"8]Y`YfghYb`K`U\`Yb`bUWk`XYf
7cj`]X!%-`!DUbXYa`]Y`\UVYb`b]Wk`h`bi`f`X]Y`bUh]cbU`Y`Gh]a`a`i`b[
VYY]bZi`gghž`gcbXYfb`Ui`Wk`H\`Ya`Yb`k`]Y`X]Y`K`]fhgWk`UZhž`XUg
;`Ygi`bX\Y]hgk`YgYb`i`bX`gc`n]U`Y` ;`YfYWk`h][`_Y]h`]b`XYb`J`cfXYf[`fi`bX
[`YfØW`h" `ϕ`X]YgYa`I`a`ZY`X`g]bX`X]Y`gc[`YbUbbhYb`Gk`]b[`GhUhYg
j`cb`YbhgWk Y]XYbXYf`6YXYi`hi`b[`ž`XU`g]Y`c`Zh`XUg`NØb[`Y]b`Ub`XYf
K`UU[`Y`]a`Df`Åg]XYbhgWk`UZh`gk`U\`dfcnYgg`XUfghY`Yb"
6i`bXYgghUUhYb`k`]Y`5f]ncbUž` ;`Ycf[`]U`i`bX`K`]gWk`bg]b`g]bX
VYgcbXYfg`k`]Wk`h][`ž`XU`gck`c`\`8Ya`c`fUhYb`U`g`Ui`Wk

F Ydi V`_]UbYf`Xcfhi a `K Å\`Yfgh]a a Yb`_Åa dZYb"

?YbbYXmg`9bhgWXY]Xi b[ž]g]W`Ui g`XYa `K U\`_Ua dZ
ni fØW_ni n]Y\Yb`i bX`Hfi a d`ni `i bhYfghØhnYbž`_ØbbhY
k Y]hfY]WXYbXY`5i gk]f_i b[Yb`Ui Z`X]Y`K Å\`YfVUg]g`i bX`X]Y
8mbUa]_]a `K U\`_Ua dZ\UVYb"8]YgYg`6ØbXb]g`_ØbbhY`b]W`h`bi f
X]Y`fYdi V`_]Ub]gWXY`K Å\`YfgWUZ`h`a cV`]g]YfYbž`gcbXYfb`Ui W
Y]b][Y`a cXYfUHY`K Å\`Yf`Ubn]Y\Ybž`X]Y`g]W`j cb`XYf
XYa c_fUh]gWXYb`Dc`h]_`UV[Yk YbXYh`\UVYb"i a `X]Y`6YXYi hi b[
X]YgYf`?cU`h]cb`ni `j YfghY\Ybž`]gh`Yg`k]W`h][ž`X]Y`dc`h]gWXYb
<YfUi gZcFXYfi b[Yb`ni `VYhfUW`hYbž`j cf`XYbYb`X]Y`?UbX]XUHYb
ghY\Ybž`"

K U\`i a ZfU[Yb`i bX`K Å\`Yfj Yf`U`hYb

5_hi Y`Y`i a ZfU[Yb`nY][Ybž`XUgg`Hfi a d`]b`Y]b][Yb`XYf
i a _Åa dZhYb`6i bXYgghUUhYb`Ub`i bhYfghØhni b[` [Yk]bbhž`k Å\`fYbX
<Uff]g`i bhYfghØhni b[`j Yf`Yfh`@Ui h`Y]bYf`i a ZfU[Y`j cb`; U`i d`]a
GYdhYa VYf`&\$&` ` [UVYb`) (i `XYf`6YZfU[hYb`Ubž`XUgg`g]Y`a]h`XYf
F]W`hi b[ž`]b`X]Y`XUg`@UbX` [Y\`hž`i bni Z]YXYb`g]bXž`k Ug
a Ø[`]WXYfk Y]gY`Y]bYb`Di hgW`XYf`K Å\`Yfgh]a a Yb`]b`F]W`hi b[
Hfi a d`i bX`?YbbYXm`VY[Øbgh][h` , VYf`" \$i `XYf`K Å\`Yf`]b`XYb
Gk]b[`GhUhYg`\UVYb`Ub[Y[VYbž`XUgg`g]Y`VY]`XYf`bÅW`ghYb`K U\`
Y]bYb`?UbX]XUHYb`i bhYfghØhnYb`a ØW`hYbž`XYf`g]W` [Y[Yb`XUg
dc`h]gWXY`9ghUV`]g\`a Yb`h`k YbXYhž`k Ug`gck c\`Hfi a d`U`g`Ui W
?YbbYXm`ZØf`X]YgY`K Å\`Yf`UhfU`_hj `a UW`h"

9]bY`i a ZfU[Y`XYg`DYk `FYgYUfW`7YbhYfg`nY][h`Ui »YfXYa ž`XUgg
X]Y`K Å\`Yf`]b`XYb`Gk]b[`GhUhYg`ni bY\`a YbX`K Yfh`Ui Z`dYfgØb`]WXY
K YfhY`Y[Ybž`k Ug`VY]`XYf`6Y`_Ubbh\Y]hi bX`XYa `dYfgØb`]WXYb
=a U[Y`j cb`?YbbYXm`Y]bY`YbhgWXY]XYbXY`F c`Y`gd]Y`Yb`_ØbbhY`" `b
Y]bYa `gc`WXYb`hi a i `hUfh][Yb`K U\`U\`f`_Ubb`X]Y`i bhYfghØhni b[
Xi fW`VYXYi hYbXY`dc`h]gWXY`DYfgØb`]W`_Y]hYb`k]Y`?YbbYXm
Hfi a d`Y]bYb`YbhgWXY]XYbXYb`J c`fhY`]j YfgW`UZZYbž`VYgcbXYfg`VY]
XYf`A cV`]g]Yfi b[`j cb`K Å\`YfgW`UZH`Yb`† b[Yf`i bX`a cXYfUHYf
K Å\`Yf`"

6Ygi W\Yb`G]Y`i bg`Ui Z.`b!U["XY