

J YfZUggi b [ gZY]bX`]WY 'GWa ]YfYfY]'Ub  
A ÒbWYb [ `UXVUWYf`A Uf\_h\U``Y`!'Dc`]nY]  
gi W h`NYi [ Yb

I bVY\_UbbhY`VYgW a ]YfhYb`X]Y`A Uf\_h\U``Y`]b  
A ÒbWYb [ `UXVUW`a ]h] YfZUggi b [ gZY]bX`]WYb` ; fUZZ]h]"  
Dc`]nY]'gi W h`NYi [ Yb`

A ÒbWYb [ `UXVUW` `b`Y]bYf`VYgcf [ b]gYffY [ YbXYb`9bhk ]W`i b [ k i fXYb ]b`XYf`B UW h`Ui ZXYb`&\$''5i [ i gh`Ub`XYf`A Uf\_h\U``Y`Ui Z XYa`? Udi n]bYfd`Uhmž`X]Y`XYfnY]h]a`'6Ui`]ghž`a`Y`fYfY`C G6!D`UhhYb a ]h; fUZZ]h]`VYgW a ]Yfh`K Ug`ni b`W gh`k ]Y`Y]b`VUbU`Yf J UbXU`]ga`i`g`k ]f\_hž`Yb hdi`ddh]g]W`VY]' [ YbUi`YfYa`<]bgY`Yb`U`g Y]b`YfbghYf`J cfZU`ž`XU`X]Y`Ui Z [ YVfUW hYb`GW a ]YfYfY]Yb`Y]b j YfZUggi b [ gZY]bX`]WYg`Gma`Vc`nY][ Yb`'8]YgY`5fh]j`cb`Gma`Vc`]` \Uh]b`8Yi`hgW`UbX`Y]bY`\_`UfY`fYW h]WY`i`bX` [ YgY`gW UZh]WY` 6YXYi`hi`b [ `i`bX`k ]fX`j`cb`XYb`6Y`ÖfXYb`Yfbgh` [ Ybca`a`Yb"

8]Y`Dc`]nY]'j`cb`A ÒbWYb [ `UXVUW`ž`gdYn]Y``XYf`GhUUhggW`i`hnž`\Uh X]Y`9fa`]hhi`b [ Yb`ni`X]YgYa``J cfZU``Ui Z [ Ybca`a`Yb`"8 Ug J cf\UbXYbgY]b`gc`WYf`Gma`Vc`Y`Ui Z`gh`Xh]gWYb`6Ui`UfVY]hYb ghY`h`b]W h`bi`f`Y]bYb`5b [ f]ZZ`Ui Z`X]Y`ÖZYb`h]WYb`K`YfhY`XUfž` gcbXYfb`Yg`\_Ubb`Ui`W`Y]bY`F`ØW`\_Y`f`ni`YI`hfYa`]gh]gWYb` ðYc`c [ ]Yb`UbnY][ Ybž`X]Y`]b`XYf` ; YgY`gW UZh]b]W h`hc`Yf]Yfh` k`YfXYb`"9]b`gW`bY`Yf`<`UbX`i`b [ gVYXUfZ`gY]hYbg`XYf`6Y`ÖfXYb` k ]fX`U`g`b`ch`k`YbX][ `YfUW hYhž`i`a`k`Y]hYfY`J cfZ`Ä`Y`X]YgYf`5fh`ni` j`Yf`]bXYfb"

8]Y`6YXYi`hi`b [ `XYf`5i`Z`\_`Äfi`b [

8]Y`i`ba`]hY`VUfY`F`YU`\_h]cb`Ui`Z`X]Y`GW a ]YfYfY]Yb`i`a`ZUggh`X]Y

gWAbY`Y`6YgY]h[ i b[ `XYf`5i ZgWf]Zh"8]Yg`]gh`k ]Wkh[ ži a `X]Y  
[ YgY`gWUZh]WY`CfXbi b[ `i bX`X]Y`K YfhYž`X]Y`]b`XYf`XYi hgWYb  
JYfZUggi b[ `j YfUb`Yfh`g]bXž`ni `k U`fYb"8Yf`GhUUhggW`i hn`fi ZY  
NYi [ Yb`Ui Zž`g]W`ni `a Y`XYb"8]Y`Dc`]nY]`V]hhYh`U`Yž`X]Y  
a Ò[ `]WYfk Y]gY`Yhk Ug`J YfX`W`h[ Yg`VYa Yf`h`UVYbž`i bhYf`XYf  
HY`YZcbbi a a Yf`\$&`%`!`&`- \$`ni `c`bhU`h]YfYb"8Gc`WY`<]bk Y]gY  
\_ÒbbhYb`YbhgWY]XYbX`gY]bž`i a `X]Y`J YfUbhk`cfh]WYb`ni f  
FYWYbgWUZh`ni `n]Y`Yb"

⇒`XYb`YhnhYb`J`fYb`UVYb`ZUgh`U`Y`Gh`X`hY`]b`8Yi hgW`UbX  
j Yfgh`f`h`Ui Z`X]Y`6Y`\_Aa dZi b[ `j cb`j YfZUggi b[ gZ]bX`]WYb  
5`hj]h`hYb`[ YUW`hYh`K`A`fYbX`J`UbXU`]ga`i`g`A`i`Z[ `U`g`9]bnY`ZU`  
Ub[ YgY`Yb`k`]fXž`]gh`Yg`k ]Wkh[ ž`X]YgYb`U`g`HY`]Y]bYg`[ fÒ» YfYb  
DfcV`Ya`g`ni`j`YfghY`Yb"8]Y`Ni`bU`a`Y`j`cb`;`fUZZ]hž`X]Y  
bUh]cbU`gc`n]U`]gh]gWY`cXYf`Yi`hfYa`]gh]gWY`⇒Yc`c[ ]Yb  
dfcdU[ ]YfYbž`U`h]b`j`YfgW]YXYbYb`Gh`X`hYb`6Ygcf[ b]g`Ui`g[ Y`Ògh`  
8]Yg`k`]fZh`X]Y`;`fU[ Y`Ui`Zž`k`]Y`ghUf`\_X]YgY`HYbXYbnYb`]b`XYf  
;`YgY`gWUZh]YfUb`Yfh`g]bX`i`bX`k`Y`WY`A`U»`bU`a`Yb`Yf[ f]ZYb  
k YfXYb`a`ØggYb"

### K Ug`dUgg]Yfh`U`g`B`A`W`ghY`g3

8]Y`k`Y]hYfYb`G`W`f]hY`XYf`Dc`]nY`]b`A`ÒbWYb[ `UXVUW`X`ØfZhYb  
bVYb`XYb`9fa`]h`i`b[ Yb`Ui`W`X]Y`;`VYf`Y[ i b[ `Y]bgW`Y]Y» Ybž  
Df`Aj`Ybh]cbga`U»`bU`a`Yb`ni`j`Yfgh`f`\_Yb"8Uni`[ Y`Øfh  
VY]gd]Y`gk`Y]gY`X]Y`Ni`gUa`a`YbUfVY]h`a`]h]YfgW]YXYbYb`gc`n]U`Yb  
Cf[ Ub]gUh]cbYbž`X]Y`g]W`XYf`5i`Z`\_A`fi`b[ `i`bX`GYbg]V`]g]Yfi`b[ `ZØf  
fYW`hgYi`hfYa`]gh]gWY`⇒`U`hY`k`]Xa`Yb"8]Y`6Y`ØfXYb`g]bX`g]W`XYf  
<YfUi`gZcfXYfi`b[ Yb`VYk`i`gghž`X]Y`Y]bY`ni`bY`a`YbXY`Dc`Uf]g]Yfi`b[  
]b`XYf`;`YgY`gWUZh`a`]h]g]W`Vf]b[ hž`i`bX`g]bX`VYghfYVhž`XYb`8]U`c[  
ni`ZØfXYfbž`i`a`9i`hfYa`]ga`i`g`j`cfni`VYi`[ Yb"

9g`V`Y]Vh`UVni`k`UfhYbž`k`]Y`g]W`X]Y`G]h`i`Uh]cb`]b`A`ÒbWYb[ `UXVUW  
Ybhk`]W`\_Y`b`k`]fX"8]Y`F`YU`\_h]cbYb`Ui`g`XYf`6Yj`Ò`\_Yfi`b[ `Ui`Z`X]YgYb  
J`cfZU`\_ÒbbhYb`YVYbZU`g`Ui`ZgW`i`ggfY]W`gY]b`i`bX  
a Ò[ `]WYfk Y]gY`gc[ Uf`ni`f`A`cV`]g]Yfi`b[ `XYf`;`Ya`Y]bgWUZh  
ZØ`fYb"9]b[ YgY`gWUZh]WYf`?`cbgYbg[ Y[ Yb`Yi`hfYa`]gh]gWY  
⇒Yc`c[ ]Yb`\_ÒbbhY`X]Y`B`chk`YbX][`\_Y]h`i`bhYfghfY]WYbž`XUgg`U`Y

6Øf[ Yf'k UWgUa 'i bX'U\_hj] 'gY]b'gc`hYbž'i a 'XUg'Y][ YbY'I a ZY`X  
j cf'gc`WXYb'5\_hj] ]hÅhYb'ni 'gWØhnYb"

8]Y'J YfVfY]hi b[ 'j cb'j YfZUggi b[ gZY]bX`]WXYa ' ; YXUb\_Yb[ i h'V`Y]Vh  
Y]b'VYXYi hYbXYg'DfcV`Ya ž'XUg'b]W'h][ bcf]Yfh'k YfXYb'\_Ubb"  
J cfZÅ`Y'k ]Y'X]YgYf'Ub'XYf'A Uf\_h\U`Y'Ui ZXYa '? Udi n]bYfd`Uhn  
g]bX'A U\ba U`Y'XUZØfž'XUgg'Ui W`]b'Y]bYf'a cXYfbYb'; YgY`gWUZh  
\_cbh]bi ]Yf`]WXY'5bghfYb[ i b[ Yb'YfZcfXYf`]W`g]bXž'i a 'XUg  
XYa c\_fUh]gWXY'J YfghÅbXb]g'i bX'XYb'gcn]U`Yb'Ni gUa a Yb\U`h'ni  
ZØfXYfb"

< ]bhYf[ fi bX'ni f'H\Ya Uh]\_ 'j cb  
j YfZUggi b[ gZY]bX`]WXYf'DfcdU[ UbXU

æa '?cbhYi hj cb'j YfZUggi b[ gZY]bX`]WXYf'Gma Vc`\_]gh'Yg'k ]W'h][ ž  
X]Y'fYW'h]WXYb'FU\ a YbVYX]b[ i b[ Yb'i bX'X]Y' [ YgY`gWUZh]WXY  
F'Y'Yj Ubn'ni 'j YfghY\Yb"' ð'8Yi hgW`UbX'g]bX'X]Y'J Yf'k YbXi b[ 'i bX  
J YfVfY]hi b[ 'j cb'Gma Vc`Ybž'X]Y'U'g'j YfZUggi b[ gZY]bX`]W` [ Y'hYbž  
Xi fW`XUg'GhfUZ[ YgYhnVi W`fGh; 6Ł'i bhYf'z', \*U'[ YfY[ Y'h''8]YgYf  
DUfU[ fUd\ 'j YfV]YhYh'X]Y'ÒZYb'h]WXY'J Yf'k YbXi b[ 'j cb  
'?YbbnY]WXYb'j YfZUggi b[ gk ]Xf][ Yf'Cf[ Ub]gUh]cbYbž'k cni 'b]W'h  
bi f'X]Y'BG!Gma Vc`Yž'gcbXYfb'Ui W`UbXYfY'Yi hfYa ]gh]gWXY  
NY]WXYb'nÅ\`Yb"

Gc`WXY'HUhYb'g]bX'b]W'h'bi f'Y]bY'J Yf'Yhni b[ 'j cb'; YgYhnYbž  
gcbXYfb'Ui W`Y]b'NY]WXYb'ZØf'Y]bY' [ fØ» YfY' [ YgY`gWUZh]WXY  
DfcV`Ya Uh]\_ '8]Y'Ni bU\ a Y'j cb'Yi hfYa ]gh]gWXYa ' ; YXUb\_Yb[ i h']b  
j YfgW]YXYbYb'HY]Yb'XYf'; YgY`gWUZh"@Ui h'6Yf]W'hYb'XYg  
J YfZUggi b[ ggW'i hnYg'g]bX'fYW'hgYi hfYa Y'5\_hj] ]hÅhYb' ]b'XYb  
'YhnYb' ð\ fYb'Ub[ Ygh]Y[ Ybž'k Ug'X]Y' B'chk YbX][ \_Y]h'Y]bYf  
Zcfh'Ui ZYbXYb'6YcVUW'hi b[ 'i bX'DfÅj Ybh]cb' i bhYfghfY]W'h''8]Y  
N]j ] [ YgY`gWUZh'gck ]Y'ghUUh]WXY' ðgh]hi h]cbYb'g]bX' [ YZcfXYfž  
i a '8Ya c\_fUh]Y' i bX' [ YgY`gWUZh]WXY'J ]Y`ZU'h'ni 'gWØhnYb' i bX  
Yi hfYa ]gh]gWXYb'HYbXYbnYb'Ybh[ Y[ Ybni k ]f\_Yb"'K Y]hYfY  
ðZcfa Uh]cbYb'ni 'X]YgYb'H\Ya Yb'\_ØbbYb'Ui ZXYf'K YVgY]hY'XYg'

6i bXYgUa hg'ZØf'J YfZUggi b[ ggWÅi hn'bUWÅ [ Y`YgYb`k YfXYb"

9fY][ b]ggY`Ä\ b`]WÅ Yf`5 fh`]b`XYf

J Yf[ Ub[ Yb\ Y]h

⇒`XYb`YhnhYb`Ä\ fYb`[ UV`Yg`a Y\ fYfY`J cfZÄ`Y`]b`8 Yi hgWÅ`UbXž  
X]Y`a ]hj YfZUggi b[ gZY]bX`WÅ Yf`DfcdU[ UbXU`]b`J YfV]bXi b[  
ghUbXYb"6YgcbXYfg`VYa Yf\_Ybgk Yfh`k Uf`XYf': U``]b`7\Ya b]hn`ja  
Ä\ f`&\$%, ž`U`g`k Ä\ fYbX`Y]bYf'?i bX[ YVi b[ `ZfYa XYbZY]bX`]WÅ Y  
DUfc`Yb`i bX`Gma Vc`Y`cZZYb`ni f`GWÅUi `[ YghY`h`k i fXYb"8]YgY  
J cfZÄ`Y`ZØ\ fhYb`ni `Y]bYf`VfY]hYb`8 YVUhhY`]bbYf\ U`V`XYf  
6Yj Ö`\_Yfi b[ `ØVYf`Hc`YfUbnž`A Y]bi b[ gZfY`\Y]hi bX`X]Y`; fYbnYb  
X]YgYf': fY]\Y]hž]bgVYgcbXYfY`k Ybb`Yg`i a `YI hfYa ]gh]gWÅ Y  
5bg]WÅ hYb`[ Y\h`"

Y`b`]WÅ`k ]Y`ja `j cf`]Y[ YbXYb`: U``]b`A ÖbWÅYb[ `UXVUWÅ `[ UV`Yg  
Ui WÅ`]b`7\Ya b]hn`Y]bY`ghUf`\_Y`F`YU`\_h]cb`XYf`Dc`]nY`]i bX`XYf  
N]j ]`[ YgY`gWÅ UZž`X]Y`j Yfgi WÅ hYbž`XYb`J YfVfY]hYfb`gc`WÅ Yf  
5bg]WÅ hYb`9]b\ U`h`ni `[ YV]YhYb"6Y]`Y]bYf`5bU`mgY`XYf  
j YfgWÅ ]YXYbYb`J cfZÄ`Y`\_ca a h`ni a `J cfgWÅ Y]bž`XUgg`X]Y`DfÄgYbn  
j cb`gcn]U`Y`A YX]Yb`U`g`D`UhhZcfa `ZØf`X]Y`J YfVfY]hi b[  
YI hfYa ]gh]gWÅ Yf`⇒XYb`Y]bYb`bYi Yb`: UWÅ hYb`XYf`DfcV`Ya Uh]\_  
[ YgWÅ UZZYb`\Uh"8]YgY`9bhk ]W`\_i b[ `YfZc`fXYfh`Y]bY`Ub[ YdUgghY  
GhfUhY[ ]Y`j cb`6Y\ ÖfXYb`i bX`Cf[ Ub]gUh]cbYbž`i a `XYfUfh][ Yb  
HYbXYbnYb`YZY`\_h]j `ni `VY[ Y[ bYb`"

F Y`Yj UbhY`GhUh]gh]\_Yb`i bX`8 UhYb`ni

YI hfYa ]gh]gWÅ Yb`HYbXYbnYb

@Ui h`XYa `U`\_hi Y`Yb`J YfZUggi b[ ggWÅi hnVYf]WÅ hj cb`&\$&&[ UV`Yg  
Y]bYb`5bgh]Y[ `j cb`%\$`DfcdYb`h`VY]`fYWÅ hgYI hfYa ]gh]gWÅ  
a ch]j ]YfhYb`GhfUZhUhYb`ja `J Yf[ `Y]WÅ`ni a `J cf`U\ fž]ja `Ä\ f`&\$&%  
nÄ\`hYb`X]Y`9fa ]h`Yf`ØVYf`&` "\$\$\$`gc`WÅ Yf`HUhYb"8]YgY`NU\`Yb  
VY`Y[ Yb`XYb`Ub\ U`hYbXYb`8 fi W`\_j cb`fYWÅ hg`i bX`j YfXYi h`]WÅ Yb  
X]Y`Bchk YbX][ `\_Y]hj cb`dfÄj Ybh]j Yb`A U» bU\`a Yb`ni f`6Y`Äa dZi b[  
YI hfYa ]gh]gWÅ Yb`; YXUb`\_Yb[ i hg]b`XYf`; YgY`gWÅ UZi`"

Ni gÀhn`Wk`nY][ h`Y]bY`I a ZfU[ Y`XYg`ðgh]hi hg`ZØf`8Ya cg\_cd]Y  
5`YbgVUWk`XUgg`Yhk U`&\$`DfcnYbh`XYf`6YzfU[ hYb`]b`8Yi hgWk`UbX  
XYf`A Y]bi b[ `g]bXž`XUgg`X]Y`A Y]bi b[ gZfY]\Y]h`b]Wk`h`ZØf  
fYWk`hgYI hfYa Y`5bg]Wk`hYb`[ Y`hYb`gc`hY``8]YgY`5i ZZUggi b[ Yb  
k YfZYb`\_ca d`YI Y`: fU[ Yb`ni`XYb`H\Ya Yb`A Y]bi b[ gZfY]\Y]hž  
J YfgUa a`i b[ gZfY]\Y]h`i bX`XYa`I a [ Ub[ `a ]h`YI hfYa ]gh]gWk`Yb  
HYbXYbnYb`Ui Z`

: Øf`a Y`f`ðZcfa Uh]cbYb`ni`XYb`U\_hi Y`Yb`9bhk ]W`i b[ Yb`]a  
6YfY]Wk`J YfZUggi b[ ggWk`i hn`\_ØbbYb`X]Y`6Yf]Wk`hY`Ui Z`XYf  
K YVgY]hY`XYg`6i bXYgUa hg`ZØf`J YfZUggi b[ ggWk`i hn  
Y]b[ YgY\Yb`k YfXYb`

8YhU]`g

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