

HfU[ ]gWk Yf`i bZU``]b`8]Yd\c`n. `+ \$! Å\ f][ Y  
VY]`7fUg\`j Yfghc fVYb

9]b`hfU[ ]gWk Yf`i bZU``]b`8]Yd\c`n. `9]bY`+\$! Å\ f][ Y` : fUi` ]gh]fVh  
bUWk` : U\fnYi [ \_c``]g]cb`Ui ZXYf`@c\`bYf`GhfU»Y``9fa` ]hhi b[ Yb  
`Ui ZYb"

⊖`8]Yd\c`n`YfY][ bYhY`]g]Wk`Ua` `8cbbYfghU[ `Y]b`gWk`k`YfYf`i bZU``ž  
XYf`hfU[ ]gWk`Y` : c` [ Yb`\`UhhY""9]bY`+\$! Å\ f][ Y` : fUi` ]j`Yf`cf`VY]`XYa  
J`cfZU```Ui ZXYf`@c\`bYf`GhfU»Y` ]\f`@YVYbž`k` Å\ fYbX` ]\f`+`%! Å\ f][ Yf  
6Y[ `Y]hYf`i b] Yf`Yhnhž`UVYf`hfUi` a` Uh]g]Yfhž`XUj` cb`\_Ua` ""8Yf`J`cfZU``  
[ YgWk`U\` [ Y[ Yb`%\$") \$`i` \f`i bX`\`Uh`i]b`XYf`FY [ ]cb` [ fc» Yg  
5i` ZgY\`Yb`YffY[ h"

8Yf`A`Ubbž`XYf`ni` a` `NY]hdi` b`\_h`XYg`i` bZU``g`\]bhYf`XYa` `GhYi` Yf`gU»` ž  
Yf`]h`ic`ZYb`VUf`Y]bYb`a` YX]n]b]gWk`Yb`B`chZU``"8]Yg`Z0\`fhY`XUni` ž  
XUgg`Yf`X]Y`?`cb`hfc``Y`ØVYf`gY]bYb`J`c`\_gk` U[ Yb`j`Yf`cf`ž`k` Ug  
gWk`]Y»` ]Wk`ni` XYa` ` \_UhUghfcd\`U`Yb`5i` ZdfU`` [ Y[ Yb`Y]bYb`6Ui` a  
Z0\`fhY""Gc`Wk`Y`a` YX]n]b]gWk`Yb`B`chZÄ``Y`Ua` `GhYi` Yf`\_ØbbYb  
`YXYfnY]hhi` bX`i` bYfk` UfhYh`Y]bhYf`hYbž`k` Ug`X]Y` ; YZU\`fYb`Ui` Z  
i` bgYfYb`GhfU»`Yb`ni` gÄ`hn`]Wk`i` bhYfghfY]Wk`h"

I bZU``j Yf`Ui Zi bX`B`chZU``a U» bU\`a Yb

8]Y`6Y]ZU\`fYf]b`nc [ `]g]Wk`Xi` fWk`XYb`5i` ZdfU``gc`gWk`k`YfY  
J`Yf`Yhni` b[ Yb`ni` ž`XUgg`g]Y`hfc`hn`XYf`gc`Zcfh][ Yb`FYU`\_h]cb`XYf  
FYhhi` b[ g`fÄ`ZhY`bcWk`Ub`XYf`i bZU``ghY``Y`j`YfghUfV""9g`]gh  
YfghWk`ØhhYfbX`ni` VYXYb`\_Ybž`XUgg`X]Y`G]hi` Uh]cb`gc`gWk`bY``  
i` a` gWk`U[ Yb`\_Ubb`i` bX`Y]b`A`ca` Ybhi` bUWk`hgUa` Yb` : U\`fYbg`ZUHu`Y  
: c` [ Yb`\`UVYb`\_Ubb""8Yf` : U\`fYf`gY`Vgh`\_Ua` `a` ]h`Y]Wk`hYb  
J`Yf`Yhni` b[ Yb`XUj`cbž`ghY\`h`YXcWk`i` bhYf`XYa` `9]bXfi` W`\_XYg  
I bZU``g`i` bX`k` ]fX`Äfnh]Wk`VYhfYi` h"

9]b`B chUfnhi bX`XYf`F Yhi b[ gX]Ybgh`k UfYb`j cf`C fhž`Ui W`k Ybb  
Y]b`F Yhi b[ g\i VgW`fUi VYf`b]W`h`Y]b[ YgYhnh`k i fXY`"8]Yg`nY][ hž  
k ]Y`k ]W`h][ `Y]bY`gW`bY`Y`a`YX]n]b]gW`Y`hYfj`Ybh]cb`]ghž`Ui W`]b  
G]hi Uh]cbYbž`]b`XYbYb`XYf`J Yf`\_Y`fgZi gg`Ui ZfYW`hYf`U`hYb`k YfXYb  
a i gg`" h`gc`W`Yb`A ca`YbhYb`]gh`Yg`YbhgW`Y]XYbXž`XUgg`X]Y  
F Yhi b[ g\_f`ÀZhY`gW`bY`"UbXY`bž`i a`X]Y` , VYf`YVYbgW`UbW`b`ni  
g]W`Yfb"

8]Y`@c`bYf`GhfU»Y`k i fXY`bUW`X`Ya`I bZU`"dUfh]Y`" [ YgdYffhž`i a  
X]Y`9fa`]hi b[ Yb`XYf`Dc`nY]`ni`Yfa`Ò[ `]W`Yb`"8]Y`6Y`À`ÖfXYb  
`UVYb`VYgcbXYfY`G]W`Yf`Y]hgj`cf`\_Y`fi b[ Yb`[ Yhfc`ZYbž`i a`XYb  
J Yf`\_Y`fgZi gg`]b`XYf`I a`[ YVi b[ `ni`fY[ Y`bž`k`À`fYbX`X]Y  
I bZU`i fgUW`Y`k Y]hYf`i bhYfji`W`h`k`]fX"

K ]W`h][ Y`@Y`\_h]cbYb`Ui`g`XYa`J`cfZU`"

8]YgYg`hfU[ ]gW`Y`9fY][ b]g`Vf]b[ hij`]Y`Y` : fU[ Yb`ØVYf`G]W`Yf`Y]hi bX  
I bZU`j Yf`\Øhi b[ `Ui Z`J Yf`\_Y`fgi bZ`"Y`\_`ÖbbYb`Y`XYfnY]h  
[ YgW`Y`Ybž`XcW`X]Y` ; fØbXY`XUZØf`g]bX`cZhj`]Y`gW`]W`h][ "  
Df`Äj`Ybhj`Y`A`U»bU`a`Yb`i bX`fY[ Y`a`À»][ Y`a`YX]n]b]gW`Y  
I bhYfji`W`i b[ Yb`ZØf`5i hcZU`fYfž`gdYn]Y`"b`"Ö`YfYa`5`hYfž  
\_`ÖbbYb`a`Ò[ `]W`Yfk`Y]gY`Y`ZYbž`gc`W`Y`hfU[ ]gW`Yb`I bZ`"Y`]b  
Ni`\_i bZh`ni`j`Yf`]bXYfb"

5i »YfXYa`gc`"hYb`5i hcZU`fYf`ghYhg`XUfUi Z`UW`hYbž`k ]Y`g]W`]`f  
; Ygi bX`Y]hgni ghUbX`Ui Z`X]Y`J Yf`\_Y`fgg]W`Yf`Y]hi`gk`]f`\_Yb`\_`Ubb`"  
8]Y`K ]W`h][ \_Y]hj`cb`XYZYbg]j`Ya` : U`fYb`i bX  
G]hi Uh]cbgVYk i gghgY]b`\_`Ubb`b]W`h`[ Ybi [ `VYhcbh`k`YfXYb`"  
5i hci bZ`"Y`"UVYb`b]W`h`bi`f`5i`gk`]f`\_i`b[ Yb`Ui`Z`X]Y`i`ba`]hY`VUfYb  
6Yhfc`ZYbYbž`gcbXYfb`n]Y`Yb`Y]b`k`Y]hfY]W`YbXYg`B`Yhn`Ub  
?cbgYei`YbnYb`bUW`g]W`ž`X]Y`Ui`W`X]Y` : Ua`]Y]b`i bX`X]Y  
; Ya`Y]bgW`UZh`VYhfY`ZYb`"

9]b`gc`W`Yf`J`cfZU`"gh]a`a`Yf`Y]bY`9f]bbYfi b[ `Ub`X]Y` : fU[ `]h`h`XYg  
@YVYbg`i bX`X]Y`J`YfUbhk`cfhi b[ ž`X]Y`Y`XYf`j`cb`i`bg]a  
GhfU»Ybj`Yf`\_Y`f`hf`À[ h`5i hcZU`fYb`VYXYi`hYh`b]W`h`bi`f`A`cV]`h`hž  
Yg`gYhnh`Ui`W`j`cfUi`gž`XUgg`k`]f`VYfY]h`g]bXž` ; YZU`fYb`i bX`F`g]\_Yb  
ni`Yf`\_Y`bbYb`i bX`j`YfUbhk`cfhi b[ gj`c`"XUa`]hi`a`ni`[ Y`Yb`"

I bZU`i fgUW Yb`i bX`G]W Yf\ Y]hga U» bU\ a Yb

6Y]J Yf\_Y\ fgi bZ`Yb`k ]Y`XYa`hfU[ ]gW Yb`J cfZU``]b`8]Yd\c`n  
gd]Y`Yb`cZ`hY]bY`FY]\Y`j cb`: U\_hcfYb`Y]bY`Fc`Y" `b`X]YgYa` : U`  
gW Y]bh`Y]b`a`YX]n]b]gW Yf`B chZU``XYg` : U\fyfg`YbhgW Y]XYbX  
[ Yk YgYb`ni`gY]b" Gc`W Y`9fY][ b]ggY`\_ObbYb`d`Om`]W`Ui ZhfYhYbž  
k Ug`X]Y`FYU\_h]cbgnY]h`XYg` : U\fyfg`ghUf`\_VYY]bZi`ggh"@Ui`h`Y]bYf  
Ghi X]Y`XYg`8Yi hgW Yg`bgh]hi`h`Zof`B cfa`i b[ `fB`B`Ł`dUgg]YfYb`]b  
8Yi hgW`UbX`Ā\`f]W`a`Y\fyfY`hUi`gYbX`I bZ`Y`Ui Z[ fi bX  
a YX]n]b]gW Yf`B chZ`Y`Ua`GhYi Yf"

I a`XUg`F ]g]\_c`gc`W Yf`I bZ`Y`ni`a`]b]a`]YfYbž`k YfXYb  
i bhYfgW ]YX`]W Y`G]W Yf\ Y]hga U» bU\ a Yb`Ya`dZc`\`Yb" `8Uni  
[ Y\OfYb`fY[ Y`a`Ā» ][ Y`; Ygi bX\Y]hgW YW\_g`Zof`Ā`hYfY` : U\fyf`gck ]Y  
9]b]W hi b[ Yb`k ]Y`B chZU``Ugg]ghYbngmghYa`Y`]b` : U\fnYi [ Ybž`X]Y`]b  
\_f]h]gW Yb`G]hi Uh]cbYb`Ui hca`Uh]gW`\`UbXY`b`\_ObbYb" `9VYbgc  
gd]Y`Yb`5i Z`Āfi b[ g\_Ua`dU[ bYb`Y]bY`YbhgW Y]XYbXY`Fc`Yž`i a  
5b[ Y\Of][ Y`cXYf`6YhfcZYbY`Ui Z`a`Ö[ `]W Y`[ Ygi bX\Y]h`W Y  
F ]g]\_Yb`\]bni`k Y]gYb"

GhUh]gh]gW Y`8 UhYb`ni`J Yf\_Y\ fgi bZ`Yb`]b  
8 Yi hgW`UbX

K ]Y`X]Y`U\_hi`Y`ghYb`6Yf]W`hY`XYg`GhUh]gh]gW Yb`6i bXYgUa`hg  
nY][ Ybž`[ UV`Yg]a` `J\`f`&\$&&]b`8Yi hgW`UbX`ØVYf`&ž+`A`]]cbYb  
GhfU» Ybj Yf\_Y\ fgi bZ`Y`ž`k cVY]`VYgcbXYfg`\_f]h]gW Y`I bZ`Y`a`]h  
DYfgcbYbgW UXYb`YfZUggh`k YfXYb" `9]bY`XYhU]`]YfhY`5bU`mgY`XYf  
I bZU`XUhYb`nY][ hž`XUgg`Yhk`U` , `i`XYf`hOX`]W`j`Yfi b[ `ØW\_hYb  
DYfgcbYb`Ā`hYf`U`g`\*)` `J\`fY`k`UfYb" `8]Yg`i`bhYfghfY]W`h`X]Y  
6YXYi hi b[ `j`cb`A`U» bU\ a Yb`ni`f`J`Yf\_Y\ fgg]W Yf\ Y]hž  
]bgVYgcbXYfY`Zof`Ā`hYfY`J`Yf\_Y\ fghY]`bY\`a`Yf"

Ě`XYf`[ `Y]W Yb`I bhYfgi W`i b[ `k`i`fXY`ZYgh[ YghY`hž`XUgg  
a YX]n]b]gW Y`B chZ`Y`ž`gY]`Yg`Xi`fW`<`Yfn]bgi`ZZ]n]Ybn`cXYf`UbXYfY  
U\_i`hY`?`fUb`\_`Y]hgV]`XYfž`U`g`Y]bY`XYf`\`Āi`Z][`ghYb`I`fgUW Yb`Zof  
gW`k`Yfk ]Y[ YbXY`I bZ`Y`Ui ZhfYhYb" `K`Ā\`fYbX`Yg`]bX]j`]Xi`Y`  
i bhYfgW ]YX`]W Y`F ]g]\_cZU\_hcfYb`[ YVYb`\_Ubbž`VY`Y[ Yb`X]Y`8 UhYbž

XUgg'dfÀj Ybh]j Y'; Ygi bX\Y]hga U» bU\ a Yb'j cb'nYbhfU\Yf  
6YXYi hi b[ 'g]bXž'i a 'gc`WXY`HfU[ ÒX]Yb'ni 'j Yfa Y]XYb"

: c f g W X i b [ ' n i ' J Y f \_ Y \ f g g ] W X Y f \ Y ] h ' i b X  
D f À j Y b h ] c b

⊕`XYb`YhnhYb`⊕\fYb`\Uh`X]Y': c f g W X i b [ ' n i ' f ` J Y f \_ Y \ f g g ] W X Y f \ Y ] h  
Ub`6YXYi hi b[ ' [ Yk cbbYb" `I bhYfgW X ] Y X ` ] W X Y ` C f [ Ub]gUh]cbYbž`k ] Y  
XUg`6i bXYga ]b]ghYf]i a `ZØf`J Yf\_Y\ f`i bX`X][ ]hU`Y`⊕ZfUghfi \_hi fž  
gYhnYb`g]W X `U\_hj `ZØf`X]Y`J YfVYggYfi b[ `XYf`J Yf\_Y\ fgg]W X Y f \ Y ] h  
Y]b" `< ]Yfni ` [ Y\ ÒfYb`b]W X h`bi f`hYW X b]gW X Y `A U» bU\ a Ybž`gcbXYfb  
Ui W X `gc n]U`k ]ggYbgW X UZi`]W X Y `5bgÀhnY`ni f`J Yf\ U`hYbgÀbXYfi b[  
j cb': U\ fYfb"

9]b`VYa Yf\_Ybgk YfhYf': c f h g W X f ] h h ` ] b ` X ] Y g Y a ` 6 Y f Y ] W X ` ] g h ` X ] Y  
9b h k ] W \_ i b [ ' j c b ` ? U a d U [ b Y b ž ` X ] Y ` g ] W X ` U b ` À ` h Y f Y ': U \ f Y f ` f ] W X h Y b  
i b X ` U i Z X Y f Y b ` g d Y n ] Z ] g W X Y ` 6 Y X Ø f Z b ] g g Y ` Y ] b [ Y \ Y b " ` N ] Y ` ] g h ` Y g ž  
X ] Y g Y ` 6 Y j Ò ` \_ Y f i b [ g [ f i d d Y ` n i ` Y f a i h ] [ Y b ž ` g ] W X Y f Y f Y  
J Y f \_ Y \ f g Y b h g W X Y ] X i b [ Y b ` n i ` h f Y Z Z Y b ` i b X ` [ Y [ Y V Y b Y b Z U ` ` g  
U ` h Y f b U h j Y ` J Y f \_ Y \ f g a Ò [ ` ] W X \_ Y ] h Y b ` ] b ` 6 Y h f U W X h ` n i ` n ] Y \ Y b "  
⊕]h]Uh]j Yb`k ]Y` G]W X Y f ` i b h Y f k Y [ g ` V ] Y h Y b ` d U g g Y b X Y  
⊕Zcfa Uh]cbYb`i bX`GW X i ` i b [ Y b ` Ubž`i a ` XUg`6Yk i gghgY]b`ZØf  
J Y f \_ Y \ f g g ] W X Y f \ Y ] h n i ` g W X ` À f Z Y b ` i b X ` J Y f \_ Y \ f g i b Z ` ` Y ` n i  
f Y X i n ] Y f Y b "

8i fW X ` X ] Y ` ? c a V ] b U h ] c b ` U i g ` H Y W X b c ` c [ ] Y ž : c f g W X i b [ ` i b X  
5i Z ` À f i b [ g U f V Y ] h ` \_ U b b ` X ] Y ` J Y f \_ Y \ f g g ] W X Y f \ Y ] h ` \_ c b h ] b i ] Y f ` ] W X  
j Y f V Y g g Y f h ` k Y f X Y b ž ` k U g ` ` Y h n h Y b X ` ] W X ` X U n i ` V Y ] h f À [ h ž ` h f U [ ] g W X Y  
I b Z ` ` Y ` k ] Y ` X Y b ` ] b ` 8 ] Y d \ c ` n ` n i ` j Y f \ ] b X Y f b "

8 Y h U ] ` g

6 Y g i W X Y b ` G ] Y ` i b g ` U i Z ` b ! U [ " X Y